This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): In a General Packet Radio Service (GPRS) network comprising a plurality of GPRS Support Nodes (GSNs), including at least one Serving GPRS Support Node (SGSN) in communication with at least one Gateway GPRS Support Node (GGSN) via an Internet Protocol (IP)-based network comprising a plurality of intermediate nodes, a method for communicating data across the IP-based network according to a plurality of traffic classes, the method comprising steps of:

defining a plurality of delay-differentiated paths within the IP-based network between each of the at least one SGSN and each of the at least one GGSN, wherein each of the plurality of traffic classes has at least one delay-differentiated path of the plurality of delay-differentiated paths corresponding thereto;

determining, by an ingress GSN of the plurality of GSNs, a traffic class of the plurality of traffic classes corresponding to the data;

assigning, by the ingress GSN, a label to at least a portion of the data according to the traffic class to provide labeled data; and

routing, by the ingress GSN to an egress GSN of the plurality of GSNs, the labeled data through a first delay-differentiated path of the plurality of delay-differentiated paths based on correspondence of the label to the first delay-differentiated path.

Claim 2 (original): The method of claim 1, wherein the step of defining further comprises defining the plurality of delay-differentiated paths based on Multi-Protocol Label Switching (MPLS) implemented within the at least one SGSN and the at least one GGSN.

Claim 3 (original): The method of claim 1, wherein the ingress GSN comprises one of the at least one SGSN and the egress GSN comprises one of the at least one GGSN.

Claim 4 (original): The method of claim 1, wherein the ingress GSN comprises one of the at least one GGSN and the egress GSN comprises one of the at least one SGSN.

Claim 5 (original): The method of claim 1, wherein the portion of the data comprises a packet.

Claim 6 (original): The method of claim 1, wherein the step of routing further comprises:

transmitting, by the ingress GSN, the labeled data to one of the plurality of intermediate nodes;

handling, by the one of the plurality of intermediate nodes, the labeled data based on the traffic class.

Claim 7 (original) The method of claim 6, wherein each of the plurality of traffic classes has a unique correspondence to one of a plurality of per-hop behavior (PHB) groups, further comprising a step of:

assigning, by the ingress GSN, a PHB group of the plurality of PHB groups to the labeled data based on the traffic class,

wherein the step of handling further comprises handling the labeled data according to the per-hop behavior group assigned to the labeled data.

Claim 8 (original): The method of claim 7, wherein the plurality of traffic classes comprises conversational, streaming, interactive and background traffic classes, and wherein the conversational class corresponds to an Expedited Forwarding PHB group, the streaming class corresponds to a First Assured Forwarding (AF1) PHB group, the interactive class corresponds to a Second Assured Forwarding (AF2) PHB group and the background class corresponds to a Third Assured Forwarding (AF3) PHB group.

Claim 9 (previously presented): The method of claim 7, wherein the step of assigning further comprises assigning the PHB group to the labeled data based on any of a group consisting of: a source IP address, a destination IP address, a source port number, a destination port number, an IP protocol identification, a packet size and a flow label.

Claim 10 (previously presented): In a General Packet Radio Service (GPRS) network comprising a plurality of GPRS Support Nodes (GSNs), including at least one Serving GPRS Support Node (SGSN) in communication with at least one Gateway GPRS Support Node (GGSN) via an

Internet Protocol (IP)-based network comprising a plurality of intermediate nodes, a method for communicating data across the IP-based network according to a plurality of traffic classes, the method comprising steps of:

determining, by an ingress GSN of the plurality of GSNs, a traffic class of the plurality of traffic classes corresponding to the data;

assigning, by the ingress GSN, a per-hop behavior (PHB) group of a plurality of PHB groups to the data based on the traffic class;

transmitting, by the ingress GSN, a portion of the data to one of the plurality of intermediate nodes; and

handling, by the one of the plurality of intermediate nodes, the portion of the data based on the PHB group.

Claim 11 (original): The method of claim 10, wherein the portion of the data comprises a packet.

Claim 12 (original): The method of claim 10, wherein the plurality of traffic classes comprises conversational, streaming, interactive and background traffic classes, and wherein the conversational class corresponds to an Expedited Forwarding PHB group, the streaming class corresponds to a First Assured Forwarding (AF1) PHB group, the interactive class corresponds to a Second Assured Forwarding (AF2) PHB group and the background class corresponds to a Third Assured Forwarding (AF3) PHB group.

Claim 13 (previously presented): The method of claim 10, wherein step of assigning further comprises assigning the PHB group to the data based on any of a group consisting of: a source IP address, a destination IP address, a source port number, a destination port number, an IP protocol identification, a packet size and a flow label.

Claim 14 (original): The method of claim 10, wherein the ingress GSN comprises one of the at least one SGSN and the egress GSN comprises one of the at least one GGSN.

Claim 15 (original): The method of claim 10, wherein the ingress GSN comprises one of the at least one GGSN and the egress GSN comprises one of the at least one SGSN.

Claims 16-17 (canceled)

Claim 18 (previously presented): An improved General Packet Radio Service (GPRS) network of the type comprising a plurality of GPRS Support Nodes (GSNs) in communication with each other via an Internet Protocol (IP)-based network comprising a plurality of intermediate nodes, wherein the improved GPRS network is capable of supporting a plurality of traffic classes, the improvement comprising:

at least one Serving GPRS Support Node (SGSN) and at least one Gateway GPRS Support Node (GGSN) having a plurality of delay-differentiated paths within the IP-based network between each of the at least one SGSN and each of the at least one GGSN, wherein each of the plurality of traffic classes has at least one delay-differentiated path of the plurality of delay-differentiated paths corresponding thereto, wherein each of the at least one SGSN and each of the at least one GGSN further function to assign a per-hop behavior (PHB) group of a plurality of PHB groups to data belonging to a traffic class of the plurality of traffic classes, wherein the intermediate nodes handle the data according to the PHB group.

Claim 19 (original): The improved GPRS network of claim 18, wherein the plurality of traffic classes comprises conversational, streaming, interactive and background traffic classes, and wherein the conversational class corresponds to an Expedited Forwarding PHB group, the streaming class corresponds to a First Assured Forwarding (AF1) PHB group, the interactive class corresponds to a Second Assured Forwarding (AF2) PHB group and the background class corresponds to a Third Assured Forwarding (AF3) PHB group.

Claim 20 (previously presented): The improved GPRS network of claim 18, wherein the step of assigning further comprises assigning the PHB group to the data based on any of a group consisting of: a source IP address, a destination IP address, a source port number, a destination port number, an IP protocol identification, a packet size and a flow label.

Claim 21 (previously presented): In a General Packet Radio Service (GPRS) network comprising a plurality of GPRS Support Nodes (GSNs), a method for communicating data across an IP-based network according to a plurality of traffic classes, the method comprising steps of:

determining, by an ingress GSN of the plurality of GSNs, a traffic class corresponding to the data; and

assigning, by the ingress GSN, a label to at least a portion of the data according to the traffic class to provide labeled data; and

routing the labeled data through one of a plurality of delay-differentiated paths based on a correspondence of the label to the one delay-differentiated path.